

R E M A R K S

The office action of August 23, 2010 has been reviewed and its contents carefully noted. Reconsideration of this case, as amended, is requested. Claims 13 and 19-20 remain in this case, claims 19 and 20 being added and claim 13 being amended by this response. No new matter has been added. More specifically, claims 19 and 20 are fully supported, for example by claim 13, as filed.

Rejection under 35 U.S.C. §112

2. Claim 13 was rejected under 35 U.S.C. 112 as being indefinite. Claim 13 has been amended to overcome the rejection. Reconsideration and withdrawal of the rejection are respectfully requested.

Rejection under 35 U.S.C. §103

6. Claim 13 was rejected under 35 U.S.C. 103(a) as being unpatentable over Fujii et al. (5,411,535) in view of Heller (6,294,281). Applicant respectfully disagrees with this rejection.

In embodiments of the present invention, a plurality of ultra miniature pacemakers can be used at the same time. The present invention, as claimed in claim 13, provides a way to regulate a plurality of pacemakers not to function independently. The pacemakers interact with each other so that the information can be exchanged. Due to the interaction between the pacemaker claimed in claim 13 and the other pacemakers from which it obtains information, the pacemaker claimed in claim 13 is able to provide patients with the best stimulation timing by detecting some specific conditions set by information exchange between pacemakers.

Amended claim 13 includes, in part, “wherein the control unit outputs the control signal based on information selected from the group consisting of information sent from other pacemakers implanted into the heart; electrocardiographic information; and a combination of information sent from other pacemakers implanted into the heart and electrocardiographic information”.

Fujii does not teach or suggest the control unit outputting a control signal based on information sent from other pacemakers implanted into the heart. Fujii teaches cardio information (measured between cardio-measurement electrodes 125 and 135) that is transmitted from the electrode unit 150 to the main body 100 of the pacemaker (col. 7, lines 4-23). Fujii does not teach or suggest receiving any information from other pacemakers in the heart. Instead, the cardio-information detection section is placed on the heart itself. “The positions where the pacing electrodes and the cardio-information detecting section are fixed to the endocardium varies according to the state of the patient: namely, the pacing electrodes and the cardio-information detecting section may be fixed both to the ventricle and the atrium; the pacing electrode may be fixed to only one of the atrium and ventricle; or the cardio-information detecting section and the pacing electrode are fixed to the ventricle and the atrium, respectively”. (col. 2, line 61 through col. 3, line 2).

In fact, Fujii does not mention other pacemakers in the heart at all. Therefore, Fujii necessarily can not teach or suggest a control unit that outputs a control signal based on information selected from the group consisting of information sent from other pacemakers implanted into a heart, electrocardiographic information, or a combination of information sent from the other pacemakers and electrocardiographic information.

Heller does not teach or suggest what Fujii et al. lacks. More specifically, Heller does not teach or suggest a pacemaker with a control unit that outputs a control signal based on information sent from other pacemakers implanted into a heart. Instead, Heller teaches a biological fuel cell that extracts electrons from an oxidative reaction of biological fuels composed of an anode or a cathode.

Fujii and Heller, alone or in combination, do not teach or suggest claim 13. Therefore, claim 13 is not obvious over these references. Applicants respectfully request reconsideration and withdrawal of this rejection.

Conclusion

Applicant believes the claims, as amended, are patentable over the prior art, and that this case is now in condition for allowance of all claims therein. Such action is thus respectfully

requested. If the Examiner disagrees, or believes for any other reason that direct contact with Applicants' attorney would advance the prosecution of the case to finality, he is invited to telephone the undersigned at the number given below.

"Recognizing that Internet communications are not secured, I hereby authorize the PTO to communicate with me concerning any subject matter of this application by electronic mail. I understand that a copy of these communications will be made of record in the application file."

Respectfully Submitted:
Sunagawa et al.

By: /mav #45612/
Meghan Van Leeuwen, Reg. No. 45,612
Attorney for Applicant

BROWN & MICHAELS, P.C.
400 M&T Bank Building - 118 N. Tioga St.
Ithaca, NY 14850
(607) 256-2000 • (607) 256-3628 (fax)
e-mail: docket@bpmlegal.com
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